



SEQUENCE LISTING

<110> Jane H. Morse and James A. Knowles

<120> Role of PPH1 Gene in Pulmonary Hypertension

<130> 0575/62430-A/JPW/SHS

<140> 09/904,380

<141> 2001-07-12

<160> 30

<170> PatentIn version 3.1

<210> 1

<211> 6234

<212> DNA

<213> Human

<400> 1

atgacttcct cgctgcagcg gccctggcgg gtgccctggc taccatggac tactgaagga 60

gcgacgtcgc cgggaccgcc cacgggaccg atggtacctg catcctgctg gtcagcactg 120

B³ eggctgcttc gcagaatcaa gaacggctat gtaggacgac cagtcgtgac gccgacgaag 180

cgtcttagtt cttgccgata gtgcgtttaa agatccgtat cagcaagacc ttgggatagg 240

tgagagtaga cacgcaaatt tctaggcata gtcgttctgg aaccctatcc actctcatct 300

atctctcatg aaaatgggac aatattatgc tcgaaaggta gcacctgcta tagagagtac 360

ttttaccctg ttataatacg agctttccat cgtggacgat tggcctttgg gagaaatcaa 420

aaggggacat aaatcttgta aaacaaggat accggaaacc ctctttagtt ttcccttgta 480

tttagaacat ttgttcccta gttggtctca cattggagat cccaagagt gtcactatga 540

agaatgtgta caaccagagt gtaacctcta ggggttctca cagtgatact tcttacacat 600

gtaactacca ctctccctc aattcagaat ggaacatacc gtttctgctg cattgatggg 660

gaggagggag	ttaagtctta	ccttgatatg	caaagacgac	ttgtagcaca	gatttatgta	720
atgtcaactt	tactgagaat	tttccacctc	aacatcgtgt	ctaaatacat	tacagttgaa	780
atgactctta	aaaggtggag	ctgacacaac	accactcagt	ccacctcatt	catttaaccg	840
agatgagaca	gactgtgttg	tggtgagtca	ggtggagtaa	gtaaattggc	tctactctgt	900
ataatcattg	ctttggcatc	agtcctctgta	ttagctgttt	tgatagttgc	tattagtaac	960
gaaaccgtag	tcagagacat	aatcgacaaa	actatcaacg	cttatgcttt	ggatacagaa	1020
tgttgacagg	agaccgtaaa	caaggtcttc	gaatacgaaa	cctatgtctt	acaactgtcc	1080
tctggcattt	gttccagaag	acagtatgaa	catgatggag	gcagcagcat	ccgaaccctc	1140
tcttgatcta	tgtcatactt	gtactacctc	cgtcgtcgta	ggcttgggag	agaactagat	1200
gataatctga	aactgttgga	gctgattggc	cgaggtcgat	atggagcagt	ctattagact	1260
ttgacaacct	cgactaaccg	gctccagcta	tacctcgtca	atataaaggc	tccttgggatg	1320
agcgtccagt	tgctgtaaaa	gtgttttcct	tatatttccg	aggaacctac	tcgcaggtea	1380
acgacatttt	cacaaaagga	ttgcaaaccg	tcagaatttt	atcaacgaaa	agaacattta	1440
cagagtgcct	aacgtttggc	agtcttaaaa	tagttgcttt	tcttgtaaat	gtctcacgga	1500
ttgatggaac	atgacaacat	tgcccgcctt	atagttggag	atgagagagt	aactaccttg	1560
tactgttgta	acgggcgaaa	tatcaacctc	tactctctca	cactgcagat	ggacgcatgg	1620
aatatttgct	tgtgatggag	tactatccca	gtgacgtcta	cctgcgtacc	ttataaacga	1680
acactacctc	atgatagggt	atggatcttt	atgcaagtat	ttaagtctcc	acacaagtga	1740
ctgggtaagc	tacctagaaa	tacgttcata	aattcagagg	tgtgttcact	gacccattcg	1800
tcttgccgtc	ttgctcattc	tgttactaga	ggactggctt	atcttcacac	agaacggcag	1860
aacgagtaag	acaatgatct	cctgaccgaa	tagaagtgtg	agaattacca	cgaggagatc	1920
attataaacc	tgcaatttcc	catcgagatt	tcttaatggg	gtcctctag	taatatttgg	1980

acgttaaagg gtagctctaa taaacagcag aaatgtccta gtgaaaaatg atggaacctg	2040
tggtattagt atttgtegtc ttacacaggat cactttttac taccttggac acaataatca	2100
gactttggac tgtccatgag gctgactgga aatagactgg tgcgcccagg ctgaaacctg	2160
acaggtactc cgactgacct ttatctgacc acgcgggtcc ggaggaagat aatgcagcca	2220
taagcgaggt tggcactatc agatatatgg cctccttcta ttacgtcggg attcgctcca	2280
accgtgatag tctatatacc caccagaagt gctagaagga gctgtgaact tgagggactg	2340
tgaatcagct gtggtcttca cgatcttcct cgacacttga actccctgac acttagtcga	2400
ttgaaacaag tagacatgta tgctcttggg ctaatctatt gggagatatt aactttgttc	2460
atctgtacat acgagaacct gattagataa cctctataa tatgagatgt acagacctct	2520
tcccagggga atccgtacca gaggaccaga atactctaca tgtctggaga agggccccct	2580
taggcatggt ctcattggtct tggcttttca gacagagggt ggaaaccatc ccacttttga	2640
ggatatgcag accgaaaagt ctgtctccaa cctttggtag ggtgaaaact cctatacgtc	2700
gttctcgtgt ctagggaaaa acagagaccc aagttcccag aagcctggaa caagagcaca	2760
gatccctttt tgtctctggg ttcaaggggtc ttcggacctt agaaaatagc ctggcagtga	2820
ggtcactcaa ggagacaatc gaagactgtt tcttttatcg gaccgtcact ccagtgaagt	2880
cctctgttag cttctgacaa gggaccagga tgcagaggct cggcttactg cacagtgtgc	2940
tgaggaaagg ccctggtcct acgtctccga gccgaatgac gtgtcacacg actcctttcc	3000
atggctgaac ttatgatgat ttgggaaaga aacaaatctg tgagcccaac taccgacttg	3060
aataactacta aaccctttct ttgttttagac actcgggttg agtcaatcca atgtctactg	3120
ctatgcagaa tgaacgcaac ctgtcacata tcagttaggt tacagatgac gatacgtctt	3180
acttgcgttg gacagtgtat ataggcgtgt gccaaaaatt ggtccttatt cagattattc	3240

ttcctcctca tatccgcaca cggtttttaa ccaggaatag gtctaataag aaggaggagt	3300
tacattgaag actctatcca tcatactgac agcatcgtga agaataatttc atgtaacttc	3360
tgagataggt agtatgactg tcgtagcact tcttataaag ctctgagcat tctatgtcca	3420
gcacaccttt gactataggg gaaaaaaacc gagactcgta agatacaggt cgtgtggaaa	3480
ctgatatccc ctttttttgg gaaattcaat taactatgaa cgacagcaag cacaagctcg	3540
aatccccagc ctttaagtta attgatactt gctgtcgttc gtgttcgagc ttaggggtcg	3600
cctgaaacaa gtgtcaccag cctctccacc aacacaacaa ccacaaacac ggactttggt	3660
cacagtggtc ggagaggtgg ttgtgttggt ggtgtttgtg cacaggactc acgccaagta	3720
ctggcatgac tactatatct gagatgccat gtgtcctgag tgcggttcat gaccgtactg	3780
atgatataga ctctacggta acccagatga aacaaatctg cataccacaa atgttgcaca	3840
gtcaattggg tgggtctact ttgtttagac gtatgggtgt tacaacgtgt cagttaacc	3900
ccaaccctg tctgcttaca gctgacagaa gaagacttgg aaaccaacaa ggttggggac	3960
agacgaatgt cgactgtctt cttctgaacc tttggttggt gctagacca aaagaagttg	4020
ataagaacct caaggaaagc tctgatgaga cgatctgggt tttcttcaac tattcttgga	4080
gttcctttcg agactactct atctcatgga gcactctctt aaacagttca gtggcccaga	4140
cccactgagc tagagtacct cgtgagagaa tttgtcaagt caccgggtct gggtgactcg	4200
agtactagtt ctagcttgct ttaccactc ataaaacttg cagtagaagc tcatgatcaa	4260
gatcgaacga aatgggtgag tattttgaac gtcactctcg aactggacag caggacttca	4320
cacagactgc aaatggccaa gcatgtttga ttgacctgtc gtctgaagt gtgtctgacg	4380
tttaccgggt cgtacaaact ttctgatgt tctgcctact cagatctatc ctctcccaa	4440
gcagcagaac aaggactaca agacggatga gtctagatag gagaggggtt cgtcgtcttg	4500
cttcccaaga gacctactag tttgcctttg aacacaaaaa attcaaaaaa gaagggttct	4560

ctggatgac	aaacggaaac	ttgtggtttt	taagttgttt	agagccccgg	ctaaaatttg	4620
gcagcaagca	caaatcaaac	ttgaaacaag	tctcggggcc	gatttttaa	cgtcgttcgt	4680
gtttagtgtg	aactttgttc	tcgaaactgg	agttgccaa	atgaatacaa	tcaatgcagc	4740
agaacctcat	agctttgacc	tcaacgggtc	tacttatgtt	agttacgtcg	tcttgagta	4800
gtggtgacag	tcaccatgaa	tggtgtggca	ggtagaaacc	acagtgttaa	caccactgtc	4860
agtggtaact	accacaccgt	ccatctttgg	tgtcacaatt	ctcccatgct	gccacaaccc	4920
aatatgccaa	taggacagta	ctatctggcc	gagggtagca	cggtgttggg	ttatacgggt	4980
atcctgtcat	gatagaccgg	aaacaaccaa	catagtga	catagggccc	aagaaatgtt	5040
gcagaatcag	tttgttggtt	gtatcactgt	gtatcccggg	ttctttacaa	cgtcttagtc	5100
tttattgggtg	aggacaccog	gctgaatatt	aattccagtc	ctgatgagca	aaataaccac	5160
tctgtgggc	cgacttataa	ttaaggtcag	gactactcgt	tgagccttta	ctgagacgag	5220
agcaacaagc	tggccatgat	gaaggtgttc	actcggaaat	gactctgttc	tcgttggttcg	5280
accggtacta	cttccacaag	tggatcgtct	tgtggacagg	agggaacggc	cactagaagg	5340
tggccgaact	acctagcaga	acacctgtcc	tcccttgccg	gtgatcttcc	accggcttga	5400
aattccaata	acaacaacag	caatccatgt	tcagaacaag	atgttcttgc	ttaaggttat	5460
tgttggtgtc	gttaggtaca	agtcttggtc	tacaagaacg	acaggggtgt	ccaagcacag	5520
cagcagatcc	tgggcatca	aagcccagaa	tgtcccacaa	ggttcgtgtc	gtcgtctagg	5580
acccggtagt	ttcgggtctt	gagcacagag	gcctaattct	ctggatcttt	cagccacaaa	5640
tgtcctggat	ctcgtgtctc	cggattaaga	gacctagaaa	gtcgggtgtt	acaggacctt	5700
ggcagcagta	tacagatagg	tgagtcaaca	caagatggca	aatcaggatc	ccgtcgtcat	5760
atgtctatcc	actcagttgt	gttctaccgt	ttagtcctag	aggtgaaaag	atcaagaaac	5820

```

gtgtgaaaac tccctattct ctttaagcggg tccacttttc tagttctttg cacacttttg 5880
agggataaga gaattcgcca ggcgcccctc cacctgggtc atctccactg aatcgctgga 5940
ctgtgaagtc ccgcgggggag gtggaccacag tagagggtgac ttagcgacct gacacttcag 6000
aacaataatg gcagtaacag ggcagttcat tccaaatcca gcactgctgt ttgttattac 6060
cgtcattgtc ccgtcaagta aggttttaggt cgtgacgaca ttaccttgca gaaggaggca 6120
ctgctacaac catgggtgtct aaagatatag aatggaacgt cttcctccgt gacgatgttg 6180
gtaccacaga tttctatatc gaatgaactg tctgtgactt acttgacaga cact 6234

```

```

<210> 2
<211> 1080
<212> PRT
<213> Human

```

```

<400> 2

```

```

Met Thr Ser Ser Leu Gln Arg Pro Trp Arg Val Pro Trp Leu Pro Trp
1          5          10          15

```

```

Thr Thr Ile Leu Leu Val Ser Thr Ala Ala Ala Ser Gln Asn Gln Glu
          20          25          30

```

```

Arg Leu Cys Cys Ala Phe Lys Asp Pro Tyr Gln Gln Asp Leu Gly Ile
          35          40          45

```

```

Gly Glu Ser Arg Ile Ser His Glu Asn Gly Thr Ile Leu Cys Ser Lys
50          55          60

```

```

Gly Ser Thr Cys Tyr Tyr Gly Leu Trp Glu Lys Ser Lys Gly Asp Ile
65          70          75          80

```

```

Asn Leu Val Lys Gln Gly Cys Cys Trp Ser His Ile Gly Asp Pro Gln

```

85								90				95			
Glu	Cys	His	Tyr	Glu	Glu	Cys	Val	Val	Thr	Thr	Thr	Pro	Pro	Ser	Ile
			100					105					110		
Gln	Asn	Gly	Thr	Tyr	Arg	Phe	Cys	Cys	Cys	Cys	Ser	Thr	Asp	Leu	Cys
		115					120					125			
Asn	Val	Asn	Phe	Thr	Glu	Asn	Phe	Pro	Pro	Pro	Pro	Asp	Thr	Thr	Pro
	130					135						140			
Leu	Ser	Pro	Pro	His	Ser	Phe	Asn	Arg	Asp	Glu	Thr	Ile	Ile	Ile	Ala
145					150					155					160
Leu	Ala	Ser	Val	Ser	Val	Leu	Ala	Val	Leu	Ile	Val	Ala	Ala	Leu	Cys
				165					170					175	
Phe	Gly	Tyr	Arg	Met	Leu	Thr	Gly	Asp	Arg	Lys	Gln	Gly	Leu	His	His
			180					185					190		
Ser	Met	Asn	Met	Met	Glu	Ala	Ala	Ala	Ser	Glu	Pro	Ser	Leu	Asp	Leu
		195					200					205			
Asp	Asn	Leu	Lys	Leu	Leu	Glu	Leu	Ile	Gly	Arg	Gly	Arg	Tyr	Gly	Ala
	210					215					220				
Val	Val	Tyr	Lys	Gly	Ser	Leu	Asp	Glu	Arg	Pro	Val	Ala	Val	Lys	Val
225					230					235					240
Phe	Ser	Phe	Phe	Ala	Asn	Arg	Gln	Asn	Phe	Ile	Asn	Glu	Lys	Asn	Ile
				245					250					255	

Tyr Arg Val Pro Leu Met Glu His Asp Asn Ile Ala Arg Phe Ile Val
 260 265 270

Gly Asp Glu Arg Val Val Thr Ala Asp Gly Arg Met Glu Tyr Leu Leu
 275 280 285

Val Met Glu Tyr Tyr Pro Asn Asn Gly Ser Leu Cys Lys Tyr Leu Ser
 290 295 300

Leu His Thr Ser Asp Trp Val Ser Ser Cys Arg Leu Ala His Ser Val
 305 310 315 320

Thr Arg Gly Leu Ala Tyr Leu His Thr Thr Glu Leu Pro Arg Gly Asp
 325 330 335

His Tyr Lys Pro Ala Ile Ser His Arg Asp Leu Leu Asn Ser Arg Asn
 340 345 350

Val Leu Val Lys Asn Asp Gly Thr Cys Val Ile Ser Asp Phe Gly Leu
 355 360 365

Ser Met Arg Leu Thr Gly Asn Arg Leu Val Arg Pro Gly Gly Glu Glu
 370 375 380

Asp Asn Ala Ala Ile Ser Glu Val Gly Thr Ile Arg Tyr Met Ala Ala
 385 390 395 400

Pro Glu Val Leu Glu Gly Ala Val Asn Leu Arg Asp Cys Glu Ser Ala
 405 410 415

Leu Lys Gln Val Asp Met Tyr Ala Leu Gly Leu Ile Tyr Trp Glu Ile
 420 425 430

Phe Phe Met Arg Cys Thr Asp Leu Phe Pro Gly Glu Ser Val Pro Glu
 435 440 445

Tyr Gln Met Met Ala Phe Gln Thr Glu Val Gly Asn His Pro Thr Phe
 450 455 460

Glu Asp Met Gln Val Leu Val Ser Arg Glu Lys Gln Arg Pro Lys Phe
 465 470 475 480

Pro Glu Ala Trp Lys Lys Glu Asn Ser Leu Ala Val Arg Ser Leu Lys
 485 490 495

Glu Thr Ile Glu Asp Cys Trp Trp Asp Gln Asp Ala Glu Ala Arg Leu
 500 505 510

Thr Ala Gln Cys Ala Glu Glu Arg Met Ala Glu Leu Met Met Ile Trp
 515 520 525

Glu Arg Asn Lys Ser Val Ser Pro Thr Thr Val Asn Pro Met Ser Thr
 530 535 540

Ala Met Gln Asn Glu Arg Asn Leu Ser His Asn Asn Arg Arg Val Pro
 545 550 555 560

Lys Ile Gly Pro Tyr Pro Asp Tyr Ser Ser Ser Tyr Ile Glu Asp
 565 570 575

Ser Ile His His Thr Asp Ser Ile Val Lys Asn Ile Ser Ser Glu His
 580 585 590

Ser Met Ser Ser Thr Pro Leu Thr Ile Gly Glu Lys Asn Arg Arg Asn
 595 600 605

Ser Ile Asn Tyr Glu Arg Gln Gln Ala Gln Ala Arg Ile Pro Ser Pro
 610 615 620

Glu Thr Ser Val Thr Ser Leu Ser Thr Asn Thr Thr Thr Thr Asn Thr
 625 630 635 640

Thr Thr Gly Leu Thr Pro Ser Thr Gly Met Thr Thr Ile Ser Glu Met
 645 650 655

Pro Tyr Tyr Pro Asp Glu Thr Asn Leu His Thr Thr Asn Val Ala Gln
 660 665 670

Ser Ile Gly Pro Thr Pro Val Cys Leu Gln Leu Thr Glu Glu Asp Leu
 675 680 685

Glu Thr Asn Lys Lys Leu Asp Pro Lys Glu Val Asp Lys Asn Leu Lys
 690 695 700

Glu Ser Ser Asp Glu Asn Asn Leu Met Glu His Ser Leu Lys Gln Phe
 705 710 715 720

Ser Gly Pro Asp Pro Leu Ser Ser Thr Ser Ser Ser Leu Leu Tyr Pro
 725 730 735

Leu Ile Lys Leu Ala Val Glu Ala Ala Thr Gly Gln Gln Gln Asp Phe
 740 745 750

Thr Gln Thr Ala Asn Gly Gln Ala Cys Leu Ile Ile Pro Asp Val Leu
 755 760 765

Pro Thr Gln Ile Tyr Pro Leu Pro Lys Gln Gln Asn Leu Pro Lys Arg

770

775

780

Pro Thr Ser Leu Pro Leu Asn Thr Lys Asn Ser Thr Lys Lys Glu Pro
 785 790 795 800

Arg Leu Lys Phe Gly Ser Lys His Lys Ser Asn Leu Lys Gln Val Val
 805 810 815

Glu Thr Gly Val Ala Lys Met Asn Thr Ile Asn Ala Ala Glu Pro His
 820 825 830

Val Val Thr Val Thr Met Asn Gly Val Ala Gly Arg Asn His Ser Val
 835 840 845

Asn Asn Ser His Ala Ala Thr Thr Gln Tyr Ala Asn Arg Thr Val Leu
 850 855 860

Ser Gly Gln Gln Thr Thr Asn Ile Val Thr His Arg Ala Gln Glu Met
 865 870 875 880

Leu Gln Asn Gln Phe Ile Gly Glu Asp Thr Arg Leu Asn Ile Asn Ser
 885 890 895

Ser Pro Asp Glu His His Glu Pro Leu Leu Arg Arg Glu Gln Gln Ala
 900 905 910

Gly His Asp Glu Gly Val Leu Leu Asp Arg Leu Val Asp Arg Arg Glu
 915 920 925

Arg Pro Leu Glu Gly Gly Arg Thr Asn Ser Asn Asn Asn Asn Ser Asn
 930 935 940

Pro Cys Ser Glu Gln Asp Val Leu Ala Ala Gln Gly Val Pro Ser Thr
 945 950 955 960

Ala Ala Asp Pro Gly Pro Ser Lys Pro Arg Arg Arg Ala Gln Arg Pro
 965 970 975

Asn Ser Leu Asp Leu Ser Ala Thr Asn Val Leu Asp Gly Ser Ser Ile
 980 985 990

Gln Ile Gly Glu Ser Thr Gln Asp Gly Lys Ser Gly Ser Ser Gly Glu
 995 1000 1005

Lys Ile Lys Lys Arg Val Lys Thr Pro Tyr Ser Leu Lys Arg Trp
 1010 1015 1020

Trp Arg Pro Ser Thr Trp Val Ile Ser Thr Glu Ser Leu Asp Cys
 1025 1030 1035

Glu Val Asn Asn Asn Gly Ser Asn Arg Ala Val His Ser Lys Ser
 1040 1045 1050

Ser Thr Ala Val Val Thr Leu Ala Glu Gly Gly Thr Ala Thr Thr
 1055 1060 1065

Met Val Ser Lys Asp Ile Gly Gly Met Asn Cys Leu
 1070 1075 1080

<210> 3
 <211> 39
 <212> DNA
 <213> Human

<400> 3
 gctgggtgagt agctccggct ttcctttatt ttagcttcg

39

<210> 4
<211> 39
<212> DNA
<213> Human

<400> 4
caaggcaagt gatactttcc atattgattt ataggatat

39

<210> 5
<211> 39
<212> DNA
<213> Human

<400> 5
ctcagtaagt aaagtaacct ttgttttctt ttaggtcca

39

<210> 6
<211> 39
<212> DNA
<213> Human

<400> 6
acaggtaaaa attaccattt tcctgttctt ataggagac

39

<210> 7
<211> 42
<212> DNA
<213> Human

<400> 7
ttggaggtaa gtttgccgtt attaaaacac ttgcagctga tt

42

<210> 8
<211> 42
<212> DNA
<213> Human

<400> 8
cccaatgtaa gttcttcata gtttctctct atatagggat ct 42

<210> 9
<211> 39
<212> DNA
<213> Human

<400> 9
ggaggtaaga tagtcaataa aattatccaa acagatcat 39

<210> 10
<211> 42
<212> DNA
<213> Human

<400> 10
agcgagggtga gtgtatacaa aactctaatt tatcaggttg gc 42

<210> 11
<211> 39
<212> DNA
<213> Human

<400> 11
ccaggtaaaa actactgtct ctacaaatcc acaggggaa 39

<210> 12
<211> 42
<212> DNA
<213> Human

<400> 12
agcctggtaa gaaaaaacta atactttgtc ttacaggcag tg 42

<210> 13
<211> 39
<212> DNA

<213> Human

<400> 13

gaacggtaag accctaaggg ctttctttct ttaagcaac

39

<210> 14

<211> 39

<212> DNA

<213> Human

<400> 14

cagagtaagt ggagggatcc acttttattt tcagtaggt

39

<210> 15

<211> 29

<212> PRT

<213> Human

<400> 15

Leu	Lys	Glu	Thr	Ile	Glu	Asp	Cys	Trp	Asp	Gln	Asp	Ala	Glu	Ala	Trp
1				5				10					15		

Leu	Thr	Ala	Gln	Cys	Ala	Glu	Glu	Arg	Met	Ala	Glu	Leu
			20					25				

<210> 16

<211> 29

<212> PRT

<213> Homo sapiens

<400> 16

Leu	Lys	Glu	Thr	Ile	Glu	Asp	Cys	Trp	Asp	Gln	Asp	Ala	Glu	Ala	Arg
1				5				10					15		

Leu	Thr	Ala	Gln	Cys	Ala	Glu	Glu	Arg	Met	Ala	Glu	Leu
			20					25				

<210> 17
 <211> 29
 <212> PRT
 <213> Mus musculus

 <400> 17

Leu Lys Glu Thr Ile Glu Asp Cys Trp Asp Gln Asp Ala Glu Ala Arg
 1 5 10 15

Leu Thr Ala Gln Cys Ala Glu Glu Arg Met Ala Glu Leu
 20 25

<210> 18
 <211> 29
 <212> PRT
 <213> Xenopus laevis

<400> 18

Leu Lys Glu Thr Ile Asp Asp Cys Trp Asp Gln Asp Ala Glu Ala Arg
 1 5 10 15

Leu Thr Ala Gln Cys Ala Glu Glu Arg Met Ala Glu Leu
 20 25

<210> 19
 <211> 29
 <212> PRT
 <213> Gallus gallus

<400> 19

Leu Lys Glu Thr Ile Glu Asp Cys Trp Asp Gln Asp Ala Glu Ala Arg
 1 5 10 15

Leu Thr Ala Gln Cys Ala Glu Glu Arg Met Ala Glu Leu
 20 25

<210> 20
 <211> 29
 <212> PRT
 <213> Homo sapiens

<400> 20

Val Cys Glu Thr Leu Thr Glu Cys Trp Asp His Asp Pro Glu Ala Arg
 1 5 10 15

Leu Thr Ala Gln Cys Val Ala Glu Arg Phe Ser Glu Leu
 20 25

<210> 21
 <211> 29
 <212> PRT
 <213> Mus musculus

<400> 21

Val Cys Glu Thr Leu Thr Glu Cys Trp Asp His Asp Pro Glu Ala Arg
 1 5 10 15

Leu Thr Ala Gln Cys Val Ala Glu Arg Phe Ser Glu Leu
 20 25

<210> 22
 <211> 29
 <212> PRT
 <213> Rattus Norvegicus

<400> 22

Val Cys Glu Thr Leu Thr Glu Cys Trp Asp His Asp Pro Glu Ala Arg
 1 5 10 15

Leu Thr Ala Gln Cys Val Ala Glu Arg Phe Ser Glu Leu
 20 25

<210> 23
 <211> 29
 <212> PRT
 <213> Homo sapiens

<400> 23

Leu Cys Val Thr Ile Glu Asp Cys Trp Asp His Asp Ala Glu Ala Arg
 1 5 10 15

Leu Ser Ala Gly Cys Val Glu Glu Arg Val Ser Leu Ile
 20 25

<210> 24
 <211> 29
 <212> PRT
 <213> sheep

<400> 24

Leu Cys Glu Thr Ile Glu Glu Cys Trp Asp His Asp Ala Glu Ala Arg
 1 5 10 15

Leu Ser Ala Gly Cys Val Gly Glu Arg Ile Thr Gln Met
 20 25

<210> 25
 <211> 29
 <212> PRT
 <213> Gallus gallus

<400> 25

Leu Cys Glu Thr Ile Glu Glu Cys Trp Asp His Asp Ala Glu Ala Arg
 1 5 10 15

Leu Ser Ala Gly Cys Val Glu Glu Arg Ile Ile Gln Met
 20 25

<210> 26
 <211> 29
 <212> PRT
 <213> Homo sapiens

<400> 26

Leu Arg Glu Leu Leu Glu Asp Cys Trp Asp Ala Asp Pro Glu Ala Arg
 1 5 10 15

Leu Thr Ala Glu Cys Val Gln Gln Arg Leu Ala Ala Leu
 20 25

<210> 27
 <211> 29
 <212> PRT
 <213> Rattus Norvegicus

<400> 27

Leu Arg Glu Leu Leu Glu Asp Cys Trp Asp Ala Asp Pro Glu Ala Arg
 1 5 10 15

Leu Thr Ala Glu Cys Val Gln Gln Arg Leu Ala Ala Leu
 20 25

<210> 28
 <211> 29
 <212> PRT
 <213> C.elegans

<400> 28

Leu Lys Lys Val Thr Glu Glu Met Trp Asp Pro Glu Ala Cys Ala Arg
 1 5 10 15

Ile Thr Ala Gly Cys Ala Phe Ala Arg Val Trp Asn His
 20 25

<210> 29

<211> 29

<212> PRT

<213> Xenopus laevis

<400> 29

Leu Cys Val Thr Ile Glu Glu Cys Trp Asp His Asp Ala Glu Ala Arg
 1 5 10 15

Leu Ser Ala Gly Cys Val Glu Glu Arg Ile Ser Gln Ile
 20 25

<210> 30

<211> 28

<212> PRT

<213> Human

<400> 30

Leu Lys Glu Thr Ile Glu Asp Cys Trp Asp Asp Ala Glu Ala Arg Leu
 1 5 10 15

Thr Ala Gln Cys Val Glu Glu Arg Met Ala Glu Leu
 20 25